

# Glass-ceramics – Preparation

## Basic rules

- Circular shoulder preparation with rounded inner edges or chamfer with a width of approx. 1 mm
- No feather edges
- Avoid sharp edges and angles
- Adhesive cementation protocols allow conservative cavity preparation
- Make sure to observe minimum layer thicknesses (stability of the restoration)

### Bridges (IPS e.max Press)

The maximum acceptable pontic width depends on the position, size and state of the teeth, as well as the position of the abutment within the tooth arch. The measurements to determine the bridge pontic width should be taken on the unprepared tooth.

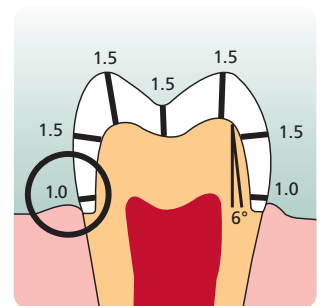
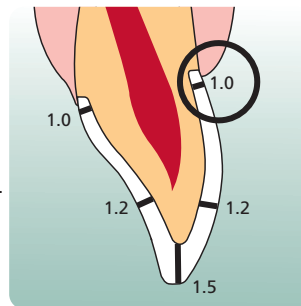
- In the anterior region (up to the canine), the bridge pontic width should not exceed 11 mm.
- In the premolar region (from the canine up to the 2<sup>nd</sup> premolar), the bridge pontic width should not exceed 9 mm.

### Anterior and posterior crowns (IPS e.max Press | IPS e.max CAD)

Evenly reduce the anatomical shape and observe the stipulated minimum thicknesses. Prepare a circular shoulder with rounded inner edges or chamfer with an angle of approx. 10–30°. The width of the circular shoulder/chamfer is approx. 1 mm. Reduction of the crown third – incisal or occlusal areas – by approx. 2 mm. For anterior crowns, the labial and palatal/lingual part of the tooth should be reduced by approx. 1.5 mm.

#### IPS e.max CAD

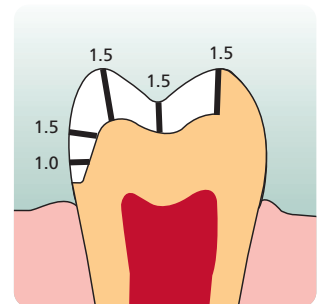
The incisal edge of the preparation should be at least 1 mm (milling tool geometry) in order to permit optimum milling of the incisal edge during CAD/CAM processing.



A retentive tooth preparation design cannot be used if an adhesive luting technique is chosen.

### Partial crowns

Provide at least 1.5 mm of space in the cusp areas. Partial crowns are indicated if the preparation margin is less than approx. 0.5 mm away from the cusp tip, or if the enamel is severely undermined. Prepare a circular shoulder with rounded inner edges or chamfer with an angle of approx. 20–30°. The width of the shoulder/chamfer is approx. 1.0 mm.



### Veneers

If possible, the preparation should be entirely located in the enamel. The incisal preparation margins should not be located in the area of the abrasion surfaces or dynamic occlusal surfaces. By preparing orientation grooves using a depth marker, controlled enamel reduction can be achieved. Opening of the proximal contacts is not required.

**Preparation without involving of the incisal edges (only labial reduction):** The preparation depth in the labial area should be at least 0.6 mm.

**Preparation reduction of the incisal edge (labial/incisal reduction):** The preparation depth in the cervical and labial area should be at least 0.6 mm. The incisal edge must be reduced by 0.7 mm. The more transparent the incisal edge of the intended veneer, the more pronounced the reduction should be.

